

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

ALLOWABLE SUBJECT MATTER

The Examiner's indication of the allowability of the subject matter of claims 3 and 5-10 is respectfully acknowledged. These claims, however, have not been rewritten in independent form at this time since, as set forth in detail hereinbelow, it is respectfully submitted that their parent claim 1 also recites allowable subject matter.

THE SPECIFICATION

The abstract has been amended to contain fewer than 150 words, to better comply with the requirements of MPEP 608.01(b), as required by the Examiner. No new matter has been added, and it is respectfully requested that the amendments to the specification be approved and entered, and that the objection to the specification be withdrawn.

THE CLAIMS

The claims have been amended to make some minor grammatical improvements so as to put them in better form for issuance in a U.S. patent. No new matter has been added, and it is

respectfully requested that the amendments to the claims be approved and entered. It is respectfully submitted, moreover, that the amendments to the claims are not related to patentability, and do not narrow the scope of the claims either literally or under the doctrine of equivalents.

THE PRIOR ART REJECTION

Claims 1 and 2 were rejected under 35 USC 102 as being anticipated by USP 4,272,736 ("Gercekci et al"), and claim 4 was rejected under 35 USC 103 as being obvious in view of the combination of Gercekci et al and USP 5,446,419 ("Miya et al"). These rejections, however, are respectfully traversed.

According to the Examiner's interpretation of Gercekci et al, transistor T2 corresponds to the amplifier of the oscillation unit, transistor T1 corresponds to the first switch circuit, and transistor T3 corresponds to the second switch circuit, in the structure recited in claim 1. It is respectfully pointed out that according to Gercekci et al, in a stop operation mode shown in Fig. 1, a second switch circuit (T3) is turned on, and a direct current flows through an amplifier (T2) via T3 and L. In such a state, since there is a resistance component (on resistance) in a current pathway between the drain and the source of T3, a part of the source voltage of T3 is returned to a gate

terminal of T2 via R. Therefore, the oscillation does not completely stop. In other words, when a direct current is supplied to T2 in the structure of Gercekci et al, the oscillation does not completely stop.

In addition, the oscillator of Gercekci et al includes a gate circuit of an output circuit (38). This gate circuit 38 corresponds to the switch circuit 15 shown in FIG. 10 of the present application, which represents a conventional radar oscillator. It is respectfully submitted that the gate circuit 38 of Gercekci has a problem in that slight leakage occurs, as explained on page 2, lines 14-25 of the present application with respect to the conventional structure of Fig. 10.

The present invention as recited in claim 1 is directed to a radar oscillator to be used for a radar, and in particular is intended to prevent the slight leakage that occurs in the conventional structure.

As recited in claim 1, the first switch circuit turns off an electric power supply to the amplifier in a period in which a pulse signal representing a transmitting period for transmitting the oscillation signal as a transmitting radar signal is not input, to set the oscillation unit in a non-oscillation state. And the second switch turns on the electric power supply by the

power supply unit to the LC resonator in a predetermined period immediately before the pulse signal is input in a period in which the pulse signal is not input, to supply a predetermined current to the LC resonator.

Thus, according to the present invention as recited in claim 1, when oscillation is stopped, the first switch (30) is turned off, and the second switch (40) is turned on. As a result, current is supplied to an LC resonator (23), but electrical supply to amplifier (22) is stopped.

Moreover, as recited in claim 1, the first switch turns on the electric power supply by the power supply unit to the amplifier in a period in which the pulse signal is input to set the oscillation unit in an oscillation state. And the second switch turns off the electric power supply by the power supply unit to the LC resonator at a timing at which the pulse signal is input, to stop the supply of the predetermined current to the LC resonator.

Thus, according to the present invention as recited in claim 1, when oscillation occurs, the first switch (30) is turned on, and the second switch (40) is turned off. As a result, the supply of current from the second switch (40) to the LC resonator (23) is stopped, and a current is supplied from the first switch (30) to the LC resonator (23) via the amplifier (22), which causes an oscillation unit (20) to perform oscillation operation.

Accordingly, with the structure recited in claim 1, (A) even when the oscillation is stopped, a current is supplied to the LC resonator (23), and due to a transient phenomenon, the oscillation operation is promoted, and (B) when the oscillation is stopped, leakage of an oscillation signal is prevented.

Thus, claim 1 has solved these two contradictory objects A and B.

It is respectfully submitted that Gercekci et al fails to disclose, teach or suggest the above described structural features or advantageous effects of the radar oscillator of the present invention as recited in claim 1.

Accordingly, it is respectfully submitted that claim 1 and claims 2 and 4 depending therefrom clearly patentably distinguish over Gercekci et al, taken singly or in combination with Miya et al, under 35 USC 102 as well as under 35 USC 103, along with allowable claims 3 and 5-10.

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In view of the foregoing, entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,

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